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Adolescents' Daily Routines: Reliability and Validity of the DAY- Opp Questionnaire; An Exploratory Study

Yael Fogel

Ariel University – Israel, yfogel@gmail.com

Hadar Gross

University of Haifa – Israel, hadargros@gmail.com

Moria Adler

University of Haifa – Israel, moriaadler@gmail.com

Sara Rosenblum

University of Haifa – Israel, rosens@univ.haifa.ac.il

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Adolescents' Daily Routines: Reliability and Validity of the DAY-Opp Questionnaire; An Exploratory Study

Abstract

Background: Maintaining a balanced and diverse daily routine is one way to ease adolescents' transition to adulthood. The absence of tools that assess adolescents' daily routines led to developing the Daily Activities for Youth Opportunity (DAY-Opp) Questionnaire. This research describes the development, reliability, and validity of DAY-Opp as a clinical assessment tool of adolescents' frequency, independence, and satisfaction with daily activities.

Method: The sample of 117 typically developing adolescents (59 girls and 58 boys aged 11–19 years) divided into three age groups and completed the Hebrew version of the DAY-Opp. We statistically analyzed discriminant, concurrent, and predictive validity with the Pittsburgh Sleep Quality Index and the General Self-Efficacy Scale.

Results: As the participants' age rose, their activity frequency decreased, independence increased, and satisfaction from daily performance remained unchanged. Sleep habits and self-efficacy predicted the frequency, independence, and satisfaction in various daily routines.

Conclusions: The DAY-Opp may enable occupational therapists to map and discuss with adolescents their strengths and challenges in daily routines and, thus, improve their occupational performance, satisfaction, and well-being.

Comments

The authors report no potential conflicts of interest.

Keywords

daily activities, occupational therapy, self-report, psychometric indices

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The United Nations Convention on the Rights of the Child and the World Health Organization (World Health Organization [WHO], 2015) define adolescents as individuals between 10 and 19 years of age. Adolescence is marked by increased autonomy and access to adult activities and by decreased dependence on primary individuals (e.g., parents) and organizational supports (Arnett, 2014). Therefore, independent performance in various daily routines becomes an important challenge for adolescents.

Daily routines are a performance pattern in the occupational therapy practice framework that affects an individual's occupational identity, health, well-being, and participation in life (American Occupational Therapy Association, 2020). They constitute a mechanism to achieve goals and orderly lives, structure daily life, and promote or damage health. Because routines are embedded in cultural and ecological contexts, they require momentary time commitment but also contribute to emotional investment over time (Koome et al., 2012).

In adolescence, youth tend to participate in more informal activities, such as listening to music, hanging out with friends, watching television, and talking on the phone, and less in organized activities (Canadian Council on Social Development, 2000). In addition, they engage in self-care activities, such as applying makeup, shaving, styling hair, and using female hygiene products and contraception. Adolescents delve into a range of new occupations related to their own health care and finances, transport in the community, home maintenance, and food preparation. Further, they engage in productivity occupations, such as pursuing education and training, full or part-time work, and volunteering (Rodger et al., 2011).

However, adolescents self-report different experiences when transitioning into the adolescence life phase. For example, Widmark and Fristedt (2019) asked 10 adolescents to narrate a typical day, from waking up to falling asleep. They found eight categories of experiences that affected the adolescents' lives: changing time perceptions, enjoyment and satisfaction, challenge and competence, boredom and tediousness, deeper engagement, need, necessity or neutrality, and self-identification. Our review of the literature identified few questionnaires to measure these various aspects of adolescents' engagement in daily activities. One example is the 27-item Adherence and Responsibilities for Daily Living Questionnaire (adapted from Child Routines Inventory; Sytsma et al., 2001), which measures adherence to and responsibility for routine daily activities. Each item contains one statement about routines, and respondents indicate how often they engaged in that routine in the last month and who is responsible for the task.

The Adolescent Routines Questionnaire: Parent and Self-Report (Meyer, 2008) is a 33-item measure of the frequency of routines of adolescents between 12 and 17 years of age in five domains: daily living routines, school and discipline routines, household routines, extracurricular activities, and social routines. The Waisman Activities of Daily Living (W-ADL) Scale (Maenner et al., 2013) for adolescents and adults with developmental disabilities measures the level of independence in performing typical daily activities such as dressing, grooming, housework and chores, meal-related activities, and activities outside the home. The W-ADL's target population is adolescents and adults with substantial intellectual or developmental disabilities (including autism, fragile X, Down syndrome, and intellectual disability of unknown or other etiology).

The absence of a tool that both assesses adolescents' frequency and independence and bundles a series of activities into routines motivated the development of the Daily Activities for Youth Opportunity (DAY-Opp) questionnaire. The DAY-Opp questionnaire was designed to help fill this clinical gap and accurately portray and document adolescents' self-perceptions about their management

of the activities in their daily routines. Unlike for young children, whose parents typically report their daily functioning (Frisch & Rosenblum, 2014), adolescents must actively take part in the evaluation process and self-report their performance. This assumes the adolescents themselves, in many cases, are the best judges of their performance quality in specific activities (McCloskey et al., 2008).

In this study, we address the development of the DAY-Opp questionnaire and examine its psychometric properties; reliability and content; and discriminant, concurrent, and predictive validity. Concurrent and predictive validity were examined via correlations between the DAY-Opp questionnaire's scores, the Pittsburgh Sleep Quality Index (PSQI; Chichashvili, 2009), and the General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995) because sleep quality and self-efficacy are two major domains related to performing daily activities by adolescents. That is, most adolescents delay going to bed and, thus, get insufficient sleep. This deficiency negatively impacts their academic performance, cognitive and neurobehavioral functioning, emotional regulation, and risk-taking behavior (Kaur & Bhoday, 2017). Self-efficacy has been considered a major resource that facilitates adolescents' coping and affects their life satisfaction in the transition to early adulthood. High levels of self-efficacy are associated with goal setting, persistence, and a constructive way to cope with failures (Burger & Samuel, 2017).

We hypothesized: (a) Significant differences will be found among the DAY-Opp questionnaire's three age groups (discriminant validity); (b) significant correlations will be found among the DAY-Opp questionnaire, PSQI, and GSE (concurrent validity); and (c) the PSQI and GSE scores will predict the DAY-Opp questionnaire's dimensions (predictive validity).

Method

Procedure

The University of Haifa, Israel, Ethics Committee approved the study design (No. 193/16). The participating adolescents, as well as their parents, signed consent forms. Then, the parents completed the demographic questionnaire, and the adolescents completed the Hebrew version of the DAY-Opp, PSQI, and GSE questionnaires.

Participants

We recruited 117 typically developing adolescents (58 boys and 59 girls) through a stratified snowball method to ensure a diverse sample. The participants ranged from 11.08 to 18.83 years of age ($M = 14.6$ years, $SD = 1.88$). Inclusion criteria required the participants to be Hebrew native adolescents who attended regular (mainstream) schools and showed typical development (i.e., no documented developmental delays based on brief telephone questioning). Potential participants with known psychiatric or emotional disorders, autistic spectrum disorders, physical disabilities, or neurological diseases were excluded. Table 1 presents the participants' descriptive demographic characteristics. No significant differences were found by gender, age group, or parent education.

Table 1
Demographic Characteristics

| Characteristic | Frequency (%) |
|---|---------------|
| Gender, respondent parent | |
| Man | 13 (11.1) |
| Woman | 104 (88.9) |
| Age group, respondent parent (years) | |
| 31–40 | 31 (26.3) |
| 41–50 | 65 (55.6) |
| 51–60 | 15 (12.8) |
| 60+ | 1 (0.9) |
| Missing data | 5 (4.3) |
| Gender, adolescent | |
| Boy | 58 (49.6) |
| Girl | 59 (50.4) |
| Age group, adolescent (years) | |
| 11–14 | 44 (37.6) |
| 14–16 | 36 (30.8) |
| 16–19 | 37 (31.6) |
| Mother's education^a | |
| Not academic | 3 (2.6) |
| Academic | 114 (97.4) |
| Father's education^a | |
| Not academic | 18 (15.4) |
| Academic | 99 (84.6) |
| Socioeconomic status, family | |
| Average | 28 (23.9) |
| High | 89 (76.1) |
| Marital status, parents | |
| Married | 111 (94.9) |
| Not married | 6 (5.1) |
| Has sustainable daily routine | |
| Always | 57 (48.7) |
| Frequently | 59 (50.4) |
| Seldom | 1 (0.9) |
| Easily adapts to routine changes | |
| Always | 52 (44.4) |
| Frequently | 58 (49.6) |
| Seldom | 7 (6.0) |

Note. *N* = 117.

^a“Not academic” signifies no college-level education.

Measures

Demographic Questionnaire

The parents of the adolescent participants completed the demographic questionnaire developed for this study, which included items related to age, gender, parent education, and socioeconomic status.

DAY-Opp Questionnaire

Originally developed in Hebrew, the DAY-Opp questionnaire (Fogel & Rosenblum, 2016) is used to collect information about adolescents' daily routines to improve their self-awareness toward enhanced performance. The DAY-Opp questionnaire is divided into two parts. Part A refers to the two main dimensions (frequency and independence levels) for each item. In Part B, adolescents respond to

general questions about their satisfaction with life. All items are scored on 5-point Likert scales. Frequency items are scored from 5 (*always*) to 1 (*never*); independence items are scored from 5 (*totally independent*) to 1 (*need physical assistance from an adult*). Higher scores indicate that the adolescents perform the activity more frequently and with less assistance. Satisfaction is scored from 5 (*always*) to 1 (*never*), with higher scores indicating more satisfaction with the routine. The DAY-Opp questionnaire uses a three-pronged approach to evidence-based practice (Tickle-Degnen & Bedell, 2003), incorporating available research, practitioner reasoning, and client perspectives.

Phase 1 Development. In a separate study conducted before developing the DAY-Opp questionnaire, an occupational therapist conducted in-depth semi-structured interviews with 80 adolescents as the first phase of developing the questionnaire. Interviewees were asked to describe a typical day's experiences in logical sequence from the moment they wake up until going to sleep and, for each activity, to rate their participation frequency and independence level (Bedell et al., 2011). The participants in the current study were asked how often (frequency) and how independently they performed the activity and their self-satisfaction with their performance.

After the initial development of the DAY-Opp questionnaire, two occupational therapists, who were experts in child and adolescent development assessment and intervention, refined the questionnaire items and structure to represent the sequence of daily morning, school, afternoon, and evening routines. They then established content validity, as Heale and Twycross (2015) recommended.

Phase 2 Development. In a separate study, five expert occupational therapists, from academia and clinics, and five typically developing adolescents reviewed the original and refined the DAY-Opp questionnaire versions and assessed the extent to which it accurately measured all construct aspects (Heale & Twycross, 2015). Following their feedback and comments, we articulated several items from Part A of the questionnaire more clearly. Furthermore, five items from Part B were eliminated because the feedback identified the questions as too emotionally complex to answer upon the first reading (i.e., they were more relevant to discourse than to a questionnaire). All experts and adolescents confirmed the relevance of all items in both parts (including the reframed and deleted items). Following this stage, a final version was prepared for this current study.

PSQI Questionnaire

The PSQI questionnaire, completed by the adolescents, assesses sleep quality and sleep disorders. Originally developed in English, we used its Hebrew version (Chichashvili, 2009) in this study. The questionnaire includes 19 items used to rate seven sleep components (quality, onset, duration, efficiency, sleep disorder, use of sleep medication, and impairment in daily functioning) over the previous 4 weeks. Scores for each component range from 0 to 3. A 4-point scale assesses sleep-problem frequency: 1 (*not during the past month*), 2 (*less than once a week*), 3 (*once or twice a week*), and 4 (*three or more times a week*). The overall sleep-quality score is calculated by summing the seven component scores. An overall score of 5 or more indicates nonquality sleep. The PSQI questionnaire has demonstrated adequate reliability ($\alpha = .83$; test-retest reliability $r = .83$; Buysse et al., 1989).

GSE

The GSE (Schwarzer & Jerusalem, 1995) is used to assess respondents' broad, stable sense of their ability to cope with various stressful situations. It is intended for a general population, including adolescents aged 12 years and older. The questionnaire consists of 10 statements related to coping with new situations, solving problems, adhering to goals, and demonstrating resourcefulness. Examples include, "I can always manage to solve difficult problems if I will try hard enough" and "thanks to my

resourcefulness, I know how to handle unforeseen situations” (Schwarzer & Jerusalem, 1995). Respondents rate the extent to which each statement describes them as 1 (*not at all true*), 2 (*hardly true*), 3 (*moderately true*), or 4 (*exactly true*). Scores are averaged and multiplied by 10; thus, scale scores range from 10 to 40. In samples from 23 countries, the Cronbach’s alpha index ranged from 0.76 to 0.90; in most cases, it was 0.80. Validity of its items has been examined in several correlation studies. A positive correlation coefficient was found between the GSE and positive feelings, optimism, and job satisfaction; and negative correlations with depression, anxiety, burnout, and health complaints. This questionnaire has been used for two decades and has been translated into 31 languages, including Hebrew.

Data Analysis

We analyzed the study questionnaire results using SPSS version 25 and internal consistency using the Cronbach’s alpha coefficient to examine how well all items measured the same construct. After checking that the data were normally distributed, a multivariate analysis of variance was applied to examine differences in DAY-Opp questionnaire frequency, independence, and satisfaction levels among age groups. We analyzed Pearson correlations between the DAY-Opp, PSQI, and GSE questionnaires to establish convergent validity. Stepwise linear regression analyses were conducted to identify predictors of DAY-Opp questionnaire frequency, independence, and satisfaction levels, with age as a stable variable across all three regressions.

Results

DAY-Opp Questionnaire’s Reliability

The DAY-Opp questionnaire’s (Parts A and B) internal consistency was assessed using Cronbach’s alpha coefficient. We considered values greater than .70 acceptable. Internal consistency of Part A (37 items) was $\alpha = .84$ and of Part B (five items) was $\alpha = .71$. Internal consistency of the 25 frequency items of Part A was $\alpha = .83$. Responses to these frequency items ranged from always to never (range 25–125). Internal consistency of the 12 independence items in Part A was $\alpha = .74$. Responses to these items ranged from totally independent to full assistance required (range 12–60). Internal consistency of the five items measuring satisfaction in Part B was $\alpha = .71$ (scores 5–25).

Age-Group Differences: Discriminant Validity

To establish discriminant validity, we calculated differences among the three age groups (Curtis, 2015): early adolescence (11–14 years of age, $M = 12.57$, $SD = .55$), middle adolescence (14–16 years of age, $M = 14.73$, $SD = .34$), and late adolescence (16–19 years of age, $M = 16.90$, $SD = .67$). Significant group differences were found in daily functioning levels of frequency, independence, and satisfaction by age group, $F(6, 224) = 5.99$, $p < .001$; $\eta_p^2 = .14$. As shown in Table 2, the Bonferroni test identified significant differences between the early and late adolescence groups in frequency ($p < .002$) and independence ($p < .03$) levels with no significant differences in the satisfaction level ($p = .34$). No differences were found in the PSQI (overall sleep quality) or GES (self-efficacy) between the age groups (PSQI: $F(2, 117) = .04$, $p = .96$; $\eta_p^2 = .00$; GES: $F(2, 117) = 1.76$, $p = .17$; $\eta_p^2 = .03$).

Table 2
Differences Among Age Groups

| Daily functioning level | Early adolescence ^a | Middle adolescence ^b | Late adolescence ^c | <i>F</i> | <i>p</i> | η_p^2 |
|-------------------------|--------------------------------|---------------------------------|-------------------------------|----------|----------|------------|
| | <i>M (SD)</i> | <i>M (SD)</i> | <i>M (SD)</i> | | | |
| Frequency | 4.43 (.30) | 4.22 (.36) | 4.09 (.48) | 8.07 | .001 | .12 |
| Independence | 4.63 (.24) | 4.70 (.18) | 4.77 (.26) | 3.32 | .030 | .05 |
| Satisfaction | 4.32 (.47) | 4.24 (.45) | 4.16 (.56) | 1.09 | .340 | .01 |

Note. ^a11–14 years, *n* = 44; ^b14–16 years, *n* = 36; ^c16–19 years, *n* = 37.

Correlation Between the DAY-Opp and the GSE and PSQI Questionnaires: Concurrent Validity

Significant moderate positive correlations were found between the DAY-Opp questionnaire and the GSE (frequency: $r = .43$, $p < .001$; independence: $r = .46$, $p < .001$; satisfaction: $r = .46$, $p < .001$). These may indicate that the higher the adolescents rated their frequency, independence, or satisfaction, the greater were their feelings of self-efficacy. Conversely, significant negative moderate correlations were found between the DAY-Opp questionnaire and the PSQI (frequency: $r = -.49$, $p < .001$; independence: $r = -.36$, $p < .001$; satisfaction: $r = -.48$, $p < .001$). That is, the higher the adolescents rated their functioning, the better they rated their sleep quality.

Prediction of the DAY-Opp Questionnaire: Predictive Validity

Stepwise regression analyses were conducted on the concurrent validity questionnaires (PSQI and GSE) with the DAY-Opp questionnaire frequency, independence, and satisfaction levels. For frequency, age predicted 12% of the variance ($R^2 = .12$, $p < .001$), the PSQI predicted more than 24% ($R^2 = .36$, $p < .001$), and the GSE more than 9% (see Table 3). For independence, age predicted 5% of the variance ($R^2 = .05$, $p = .16$), the GSE more than 19% ($R^2 = .24$, $p < .001$), and the PSQI more than 4% (see Table 4). As shown in Table 5, for satisfaction, age predicted 1% of the variance ($R^2 = .01$, $p = .15$), the PSQI predicted more than 24% ($R^2 = .25$, $p < .001$), and the GSE predicted 9% ($R^2 = .35$, $p < .001$).

Table 3
Stepwise Regression: Predicting DAY-Opp Questionnaire Frequency Level

| Variable | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
|------------------|-----------|-------------|---------|-----------|-------------|---------|-----------|-------------|---------|
| Age | -.07 | .02 | -.35*** | -.07 | .01 | -.34*** | -.08 | .01 | -.37 |
| PSQI | | | | -.05 | .00 | -.48*** | -.04 | .00 | -.36*** |
| GSE | | | | | | | .30 | .07 | .32*** |
| R^2 (Adjusted) | .12 (.12) | | | .36 (.35) | | | .45 (.43) | | |
| <i>F</i> | 16.27*** | | | 31.8*** | | | 30.66*** | | |

Note. PSQI = Pittsburgh Sleep Quality Index; GSE = General Self-Efficacy Scale.

*** $p < .001$.

Table 4*Stepwise Regression: Predicting DAY-Opp Questionnaire Independence Level*

| Variable | B | SE B | β | B | SE B | β | B | SE B | β |
|---------------------------|-----------|------|---------|-----------|------|---------|-----------|------|---------|
| Age | .03 | .01 | .22* | .02 | .01 | .18* | .02 | .01 | .19 |
| GSE | | | | .24 | .05 | .44*** | .19 | .05 | .35*** |
| PSQI | | | | | | | -.01 | .00 | .23** |
| R ² (Adjusted) | .05 (.04) | | | .24 (.23) | | | .29 (.27) | | |
| F | 5.92* | | | 18.16*** | | | 13.34*** | | |

Note. GSE = General Self-Efficacy Scale; PSQI = Pittsburgh Sleep Quality Index.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 5*Stepwise Regression: Predicting DAY-Opp Questionnaire Satisfaction Level*

| Variable | B | SE B | β | B | SE B | β | B | SE B | β |
|---------------------------|-----------|------|---------|-----------|------|---------|-----------|------|---------|
| Age | -.03 | .02 | -.13 | -.03 | .02 | -.12 | -.04 | .02 | -.16 |
| PSQI | | | | -.06 | .01 | -.48*** | -.04 | .01 | -.35*** |
| GSE | | | | | | | .40 | .94 | .35*** |
| R ² (Adjusted) | .01 (.00) | | | .25 (.24) | | | .35 (.34) | | |
| F | 2.02 | | | 19.04*** | | | 20.57*** | | |

Note. PSQI = Pittsburgh Sleep Quality Index; GSE = General Self-Efficacy Scale.

*** $p < .001$.

Discussion

This study offers evidence that the DAY-Opp questionnaire assessment of adolescents' daily routines is a reliable and valid questionnaire. The DAY-Opp questionnaire discriminant validity results indicate that as adolescents' age increases, they engage less frequently in daily routine activities, their independence levels increase, and their satisfaction levels remain unchanged. These results are similar to studies that reported diminished participation frequency patterns (Jarus et al., 2010) and increased independence (Rodger et al., 2011) as adolescents move to older age groups.

During adolescence, developmental changes and transitions occur across multiple areas but are most striking in the biological and social realms. In the interpersonal realm, adolescents' lives undergo considerable reorganization to negotiate school transitions, establish new peer relationships, engage in romantic relationships and sexual activity, and negotiate greater autonomy and independence from the family (La Greca & Ranta, 2015). Those in early adolescence (transitioning from elementary to secondary school) remain highly dependent on adult authority. Middle adolescents' experiences of life in high-school are qualitatively different in expectations, exposures, and opportunities from the experiences of middle or junior-high students or high school graduates. Early adolescents begin to demonstrate adult reasoning patterns and increasing independence in daily routines. For late adolescents, reaching the age of majority imputes legal autonomy and an expectation of increasing social and economic independence. These processes are typical and relevant across all countries and cultures (Curtis, 2015) and support the age-group differences this study found in daily routine frequency and independence levels.

As expected, these results demonstrate no differences among age groups in satisfaction with life and daily routines. The participants were typically developing adolescents with no clinical levels of

cognitive, motor, or mental difficulties. Gilman and Huebner (2006) indicated that youth who reported high global satisfaction also reported more positive relationships with others (including peers and parents). In addition, they reported less intrapersonal distress (such as anxiety and depression), higher levels of hope, and a greater sense of personal control than did youth with low global satisfaction. Moreover, high global satisfaction with life was associated with greater adaptation across facets of academic, interpersonal, and intrapersonal functioning than comparatively lower satisfaction levels, even including average satisfaction.

The sleep habits variable was found to be correlated with daily routine and predictive of frequency and satisfaction (as shown by the PSQI). In 2014, the American Academy of Pediatrics reported that one of the most salient and arguably most malleable factors related to insufficient sleep is school start times. They reviewed studies that indicated middle and high-school start times had a major impact on adolescents' sleep and, thus, their daytime functioning (Owens & Adolescent Sleep Working Group, 2014). They stated that delayed start times allow students to sleep more and, thus, improve behaviors pertinent to academic success (e.g., attendance and school performance) and safety.

Sleep is described as a daily occupation pattern and prerequisite for participation in occupations during waking hours. Sufficient sleep length and quality are critical for health (Jarrin et al., 2013). Entering the teenage years often entails a changing lifestyle, such as a new school environment, new peers, more homework, and less sleep. Adolescents who sleep less can develop sleep problems (Ohayon & Roth, 2003), which negatively impacts their academic, cognitive, and neurobehavioral functioning, emotional regulation, and risk-taking behavior (Kaur & Bhoday, 2017). They report a decreased sense of well-being and quality of life (Pilcher et al., 1997).

The self-efficacy variable correlated with and was predictive of independence in daily routines among adolescents (as shown by the GSE). The ability of self-efficacy to predict functioning in daily routines can be explained by two main components: the adolescent's specific abilities and the adolescent's environment. Increased cognitive abilities during adolescence provide youth with more skills to reconcile conflicting information and cope with higher expectations; adolescents form more stable and integrated views of their capabilities, values, and attributes (Schunk & Meece, 2005). In most cultures, these capabilities are the basis for adolescents' legal autonomy and expectations of increasing social and economic independence. These age-related options and opportunities enable adolescents to become more involved in daily activities. As students engage in activities (e.g., learning), they are affected by personal (e.g., goals, cognitive processing) and situational (e.g., instruction, feedback) influences. These factors provide them with cues, for example, about how well they are learning, and affect their self-efficacy, for example, for continued learning (Schunk & Meece, 2005). Self-efficacy and personal growth are enhanced when youth overcome challenges and achieve goals they had set for themselves (Kidd & Davidson, 2007).

According to Schunk and Miller (2002), adolescents' resilience and sense of self-efficacy in overcoming difficulties will serve them well during adolescence and beyond. Self-efficacy has been considered a major resource that facilitates adolescents' coping and affects their life satisfaction during transition to young adulthood. High levels of self-efficacy are associated with goal setting, persistence, and constructive ways to deal with failures (Burger & Samuel, 2017).

Empirical evidence regarding whether sleep habits and self-efficacy are associated with daily activities and routines among adolescents has thus far been scarce. Therefore, this study provides additional evidence based on the need to address these components when dealing with adolescence.

Limitations and Future Studies

This study has several limitations, including a relatively small sample that targeted a specific population of Israeli adolescents. Further studies should sample a greater number of adolescents and in different linguistic and cultural backgrounds to examine differences between adolescents with and without neurodevelopmental disorders. For this future research, the DAY-Opp questionnaire has been translated into English and has the potential to translate into additional language for research and clinical use.

The participants in the current study generally were of high socioeconomic status, and most of their parents were married and had academic education. These factors can be a potential for bias toward populations with greater resources. Future studies with the DAY-Opp questionnaire need a much more diverse sample to determine whether these routines are typical of all adolescents and their families.

The findings show that only 24% of the variance is explained by the questionnaires we used in the present study. This may indicate that the questionnaires need to address additional activities or components to explain the variance. Therefore, further research should examine the DAY-Opp questionnaire against other components that may affect adolescents' daily activities, including emotional and cognitive components and environmental factors, such as parents' perspectives on both their children's and the family's daily routine. Adjusting the DAY-Opp questionnaire to the parent report and examining the adolescent family routine in future studies may contribute to broadening the picture. Using questionnaires that assess the adolescent's emotional state and cognitive abilities may provide additional information about the relationship between these components and the adolescents' frequency, independence, and satisfaction with their daily routines.

Conclusion

Regular positive opportunities and developmentally appropriate life experiences can prepare adolescents for successful and meaningful adult lives. Balanced daily activities and routines may help adolescents build a strong sense of connectedness to their communities and expand social roles that, in turn, facilitate their readiness for adulthood (Gorter et al., 2011). The occupational therapy literature indicates that positive mental health is achieved through participation and engagement in meaningful occupations. Occupational engagement gives meaning to life, facilitates interpersonal relationships and skill development, and promotes the realization of individual potential. Thus, to ensure adolescents' positive mental health and well-being, it is important for professionals to explore patterns of adolescents' daily routine performance that may lead to healthy or unhealthy habits.

Occupational goals help young people develop autonomy and focus on the futures they want (Kidd & Davidson, 2007). Understanding adolescents' daily routine activities can reveal important information about their current performance, strengths, and challenges for efficient engagement in everyday living. The DAY-Opp questionnaire makes it possible to initiate a discussion with the adolescents about their daily routines, participation opportunities, task demands, and amount and types of assistance used and needed. It helps to jointly create strategies that support and improve adolescents' daily performance. Moreover, this study's results highlight sleep quality and self-efficacy as major domains that must be considered in occupational therapy evaluation and intervention processes involving adolescents.

Professor Sara Rosenblum is the head of the Laboratory for the study of Complex Human Activity and Participation (CHAP) at the University of Haifa, Israel. In the CHAP laboratory, evaluation tools are being developed that are especially designed to explore day-to-day functions and participation of people of various ages and medical ailments.

Ms. Hadar Gross and Ms. Moria Adler are occupational therapists who participated in the research on the DAY-Opp Questionnaire as part of their master's degree.

Dr. Yael Fogel is the head of the laboratory for promoting daily executive functioning at the Ariel University, Israel. The laboratory is the focus of research on the relationship between daily functioning individuals and higher-level cognitive processes (executive function and awareness) in order to understand and promote efficient, adaptive, and independent functioning in daily life.

References

- American Occupational Therapy Association. (2020). Occupational therapy practice framework: Domain and process (4th ed.). *American Journal of Occupational Therapy*, 74 (Suppl. 2). <https://doi.org/10.5014/ajot.2020.74S2001>
- Arnett, J. J. (2014). *Adolescence and emerging adulthood*. Pearson.
- Bedell, G. M., Khetani, M. A., Cousins, M. A., Coster, W. J., & Law, M. C. (2011). Parent perspectives to inform development of measures of children's participation and environment. *Archives of Physical Medicine and Rehabilitation*, 92, 765–773. <https://doi.org/10.1016/j.apmr.2010.12.029>
- Burger, K., & Samuel, R. (2017). The role of perceived stress and self-efficacy in young people's life satisfaction: A longitudinal study. *Journal of Youth and Adolescence*, 46, 78–90. <https://doi.org/10.1007/s10964-016-0608-x>
- Buyse, D. J., Reynolds, C. F. III., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh sleep quality index: A new instrument for psychiatric practice and research. *Psychiatry Research*, 28, 193–213. [https://doi.org/10.1016/0165-1781\(89\)90047-4](https://doi.org/10.1016/0165-1781(89)90047-4)
- Canadian Council on Social Development. (2000). *Social cohesion in Canada: Possible indicators, highlights*. https://www.clo-ocol.gc.ca/sites/default/files/Social_Cohesion.pdf
- Chichashvili, M. (2009). *Quality of life and quality of sleep in patients 65 years and older with heart failure* [Unpublished master's thesis]. Henrietta Szold Hadassah Hebrew University.
- Curtis, A. C. (2015). Defining adolescence. *Journal of Adolescent and Family Health*, 7(2), 2–39. <https://scholar.utc.edu/cgi/viewcontent.cgi?article=1035&context=jafh>
- Fogel, Y., & Rosenblum, S. (2016). The Daily Activities for Youth Opportunity (DAY-Opp) questionnaire. University of Haifa, Israel.
- Frisch, C., & Rosenblum, S. (2014). Reliability and validity of the executive function and occupational routines scale (EFORTS). *Research in Developmental Disabilities*, 35(9), 2148–2157. <https://doi.org/10.1016/j.ridd.2014.05.003>
- Gilman, R., & Huebner, E. S. (2006). Characteristics of adolescents who report very high life satisfaction. *Journal of Youth and Adolescence*, 35, 293–301. <https://doi.org/10.1007/s10964-006-9036-7>
- Gorter, J. W., Stewart, D., & Woodbury-Smith, M. (2011). Youth in transition: Care, health and development. *Child: Care, Health and Development*, 37, 757–763. <https://doi.org/10.1111/j.1365-2214.2011.01336.x>
- Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-Based Nursing*, 18(3), 66–67. <http://dx.doi.org/10.1136/eb-2015-102129>
- Jarrin, D. C., McGrath, J. J., & Drake, C. L. (2013). Beyond sleep duration: Distinct sleep dimensions are associated with obesity in children and adolescents. *International Journal of Obesity*, 37, 552–558. <https://doi.org/10.1038/ijo.2013.4>
- Jarus, T., Anaby, D., Bart, O., Engel-Yeger, B., & Law, M. (2010). Childhood participation in after-school activities: What is to be expected? *British Journal of Occupational Therapy*, 73, 344–350. <https://doi.org/10.4276%2F030802210X12813483277062>
- Kaur, H., & Bhoday, H. S. (2017). Changing adolescent sleep patterns: Factors affecting them and the related problems. *Journal of the Association of Physicians of India*, 65(3), 73–77. <https://pubmed.ncbi.nlm.nih.gov/28462547/>
- Kidd, S. A., & Davidson, L. (2007). “You have to adapt because you have no other choice”: The stories of strength and resilience of 208 homeless youth in New York City and Toronto. *Journal of Community Psychology*, 35, 219–238. <https://doi.org/10.1002/jcop.20144>
- Koome, F., Hocking, C., & Sutton, D. (2012). Why routines matter: The nature and meaning of family routines in the context of adolescent mental illness. *Journal of Occupational Science*, 19(4), 312–325. <https://doi.org/10.1080/14427591.2012.718245>
- La Greca, A. M., & Ranta, K. (2015). Developmental transitions in adolescence and their implications for social anxiety. In K. Ranta, A. M. La Greca, L.-J. Garcia-Lopez, & M. Marttunen (Eds.), *Social anxiety and phobia in adolescents: Development, manifestation and intervention strategies* (pp. 95–117). Springer Cham.
- Maenner, M. J., Smith, L. E., Hong, J., Makuch, R., Greenberg, J. S., & Mailick, M. R. (2013).

- Evaluation of an activities of daily living scale for adolescents and adults with developmental disabilities. *Disability and Health Journal*, 6(1), 8–17. <https://doi.org/10.1016/j.dhjo.2012.08.005>
- McCloskey, G., Perkins, L., & Van Divner, B. (2008). *Assessment and intervention for executive function difficulties*. Routledge.
- Meyer, K. (2008). *Development and validation of the adolescent routines questionnaire: Parent and self-report* [Doctoral dissertation, Louisiana State University]. LSU Digital Commons. https://digitalcommons.lsu.edu/gradschool_dissertations/4052
- Ohayon, M. M., & Roth, T. (2003). Place of chronic insomnia in the course of depressive and anxiety disorders. *Journal of Psychiatric Research*, 37(1), 9–15. [https://doi.org/10.1016/S0022-3956\(02\)00052-3](https://doi.org/10.1016/S0022-3956(02)00052-3)
- Owens, J., & Adolescent Sleep Working Group. (2014). Insufficient sleep in adolescents and young adults: An update on causes and consequences. *Pediatrics*, 134(3), e921–e932. <https://doi.org/10.1542/peds.2014-1696>
- Pilcher, J. J., Ginter, D. R., & Sadowsky, B. (1997). Sleep quality versus sleep quantity: Relationships between sleep and measures of health, well-being and sleepiness in college students. *Journal of Psychosomatic Research*, 42(6), 583–596. [https://doi.org/10.1016/s0022-3999\(97\)00004-4](https://doi.org/10.1016/s0022-3999(97)00004-4)
- Rodger, S., Fitzgerald, C., Davila, W., Millar, F., & Allison, H. (2011). What makes a quality occupational therapy practice placement? Students' and practice educators' perspectives. *Australian Occupational Therapy Journal*, 58(3), 195–202. <https://doi.org/10.1111/j.1440-1630.2010.00903.x>
- Schunk, D. H., & Meece, J. L. (2005). Self-efficacy development in adolescence. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 71–96). Information Age.
- Schunk, D. H., & Miller, S. D. (2002). Self-efficacy and adolescents' motivation. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents* (pp. 29–52). Information Age.
- Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio* (pp. 35–37). NFER-NELSON.
- Sytsma, S. E., Kelley, M. L., & Wymer, J. H. (2001). Development and initial validation of the child routines inventory. *Journal of Psychopathology and Behavioral Assessment*, 23, 241–251. <https://doi.org/10.1023/A:1012727419873>
- Tickle-Degnen, L., & Bedell, G. (2003). Heterarchy and hierarchy: A critical appraisal of the “levels of evidence” as a tool for clinical decision making. *American Journal of Occupational Therapy*, 57, 234–237. <https://doi.org/10.5014/ajot.57.2.234>
- Widmark, E., & Fristedt, S. (2019). Occupation according to adolescents: Daily occupations categorized based on adolescents' experiences. *Journal of Occupational Science*, 26(4), 470–483. <https://doi.org/10.1080/14427591.2018.1546609>
- World Health Organization. (2015). *Adolescent health*. http://www.who.int/topics/adolescent_health/en